Cost Engineering Workshop
Virginia Beach, VA
3-6 June 2003

Independent Technical Reviews

COST ENGINEERING FOR CIVIL WORKS
AND
INTERAGENCY AND INTERNATIONAL SUPPORT
DIRECTORY OF EXPERTISE

COST ENGINEERING FOR CIVIL WORKS AND INTERAGENCY AND INTERNATIONAL SUPPORT DIRECTORY OF EXPERTISE

- **Support Center**
- **Virtual Teaming**
- **Independent Technical Reviews**

COST ENGINEERING FOR CIVIL WORKS AND INTERAGENCY AND INTERNATIONAL SUPPORT DIRECTORY OF EXPERTISE

Civil Works

Dredging

Equipment

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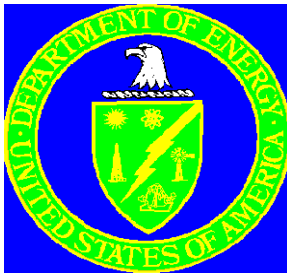


COST ENGINEERING FOR CIVIL WORKS AND INTERAGENCY AND INTERNATIONAL SUPPORT DIRECTORY OF EXPERTISE

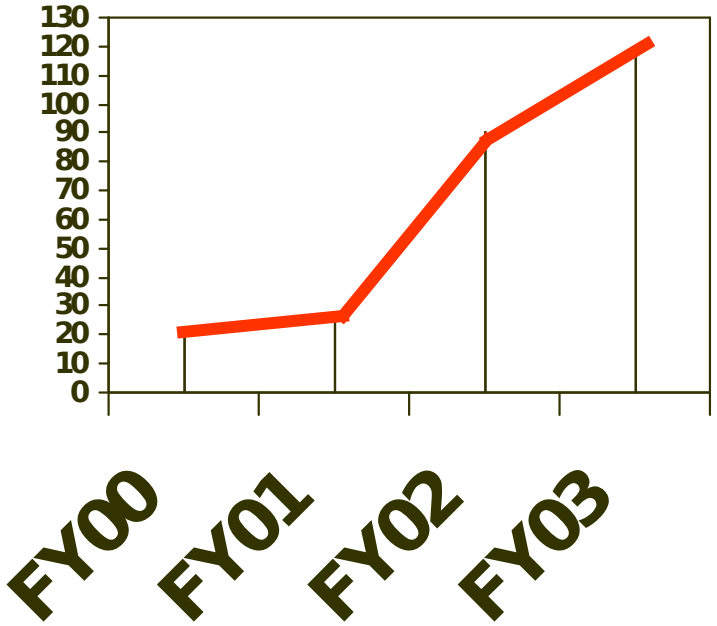
- Not a Mandatory Center
- Virtual Teaming Database
- Help Line
  - Independent Technical Reviews
  - Estimating
  - VE Studies

Independent Technical Reviews

- Short Name -- ITR's
- Performed by independent senior estimator.

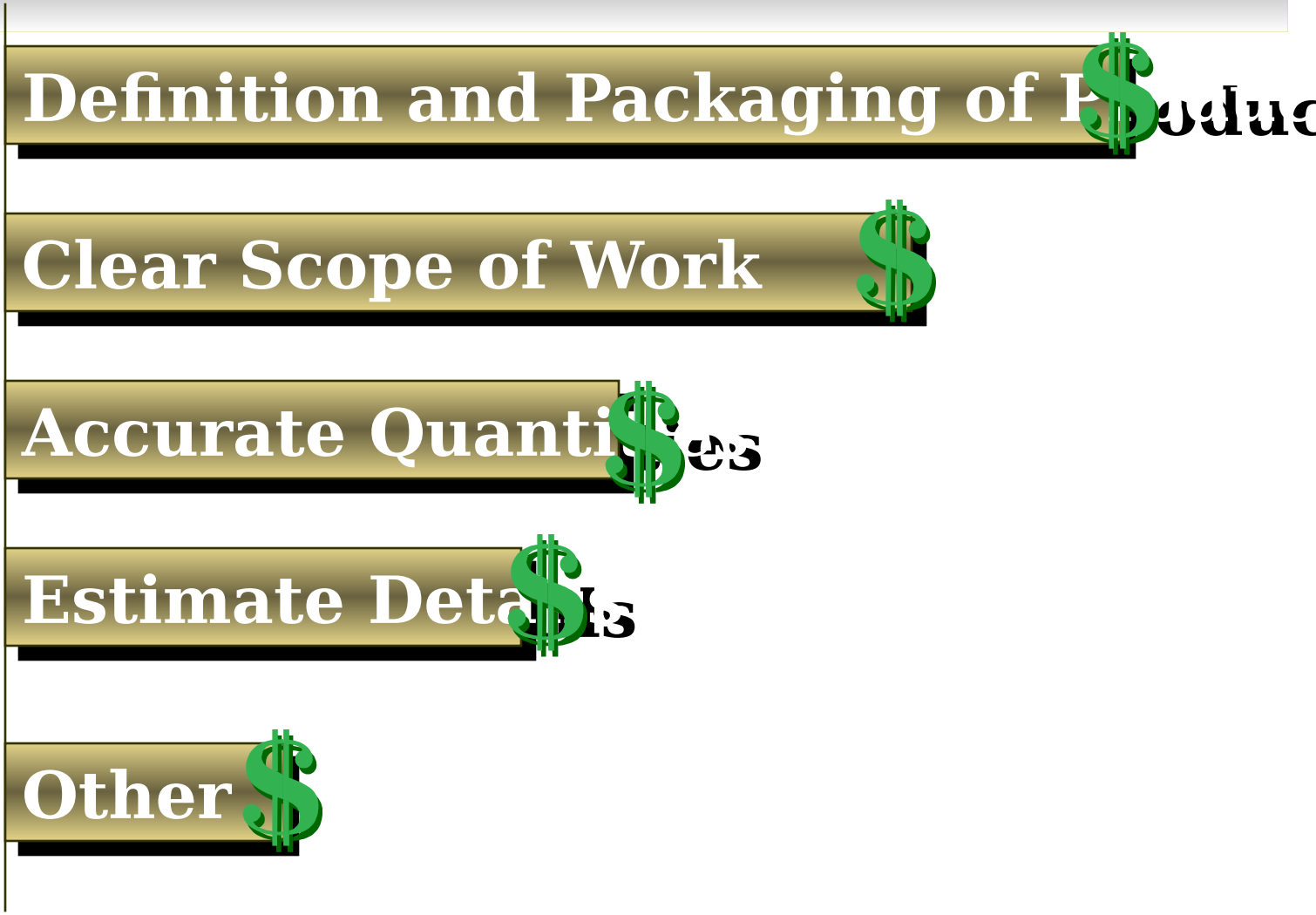
Why?

- As an agency, fighting to survive



Project "X" Baseline

Top Problem Areas for Baseline Estimates



Today……..

- Definition of Product
- Scope of Technical Review
- Game Plan for ITR
- Documentation
- Lessons Learned
- Resources
- Example

Definition of Product’s

- Budget
- Feasibility Baseline Estimate
- Contract Procurement
  - Bid, RFP, Matoc, etc…
- Other

Regulations

- ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 August 1999
- ER 1110-2-1302, Civil Works Cost Engineering, 29 March 1994

Scope of Technical Review

- Review of cost estimate
  - Labor rates, Equipment, Production etc…
- Review of Plans and Specifications
  - Contract biddable, Measurement payment, Quantities etc……

Game Plan

- Small / Less Difficult Estimates
  - All available resources.

- Large or Significant Projects
  - Senior Cost Review

Game Plan

- **SOP** **(Standard Operating Procedure)**
- **Checklist**
- **Tools**

Large Technical Review

- Obtain Data
- Clear Directions
- PDT Review Tear
- Review
- Report

Virtual

Obtain Data

- Obtain the Following;
  - Cost Estimates
  - Backup
  - Technical Documents
  - Reports/Studies
  - Project Schedule

Electronic and Hard Copy

- PMP from requestor district's PM provided to Dx

Clear Directions

- Cost Review SOW prepared in-house
- POC’s for Project under Review (Names provided by PM)
- Customers/Requestors office (understand who the Dx is working for)
- Purpose of the Dx review/how it will be used/type of review?

Clear Directions (Cont'd)

- Current Phase the product is at/definition of that phase/percent complete
- Confirm any preferred product format
- Send Dx SOW back to PM by e-mail for their response/concurrence

Selecting a PDT Review Team

- Enlist qualified review team members
- Assign team lead at for the review
- Team initial product familiarization

PDT Review Team

- Funding (MIPR before work starts)
- Schedule for Dx to complete the Review per requestor
- List of documents actually provided, w/dates, if by A-E, POC for each document, (includes electronic files)

PDT Review Team (Cont'd)

- Coordinate team members schedule – commitment to complete w/schedule to meet
- Set-up work area for document storage and holding discussions
- Initial assessment of the quality/completeness of documents by team lead

Kickoff Meeting w/ Review Team

- Assign duties for Dx review team members
- Check if documents match estimates
- Set-up FTP site and file folder on N:SFO
- Identify applicable regulations
- Schedule progress/status meetings (daily)

Review

- Detailed Assessment of the documents – read thoroughly
- Confer w/ Regulation (authority) criteria
- Document Findings (facts only – with references to documents)
- Assemble Appendices with reviewer findings/discoveries
- Assemble Main Report sections (follow Report Outline)

Review (Cont’d)

- Determine if tech editor is required

Final Steps for Report

- **Prepare Executive Summary**
- Proofread Draft Reports prior to issuing
- Inform requestor and/or PM of report findings (phone call)
- Issue **Draft** Final Report

REPORT OUTLINE

- Walla Walla Dx has Technical Review Report WBS

DOs And DON'Ts

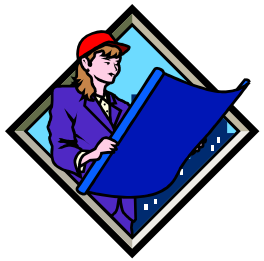
Lessons Learned

- Don't speak with another district's A-E firms.
- Make sure documented findings stand-alone – do not accept phone alibis.
- Don't use names of PDT members unless absolutely necessary (for example, when using a quote).
- Keep the team focused on the short-term product without outside distraction.
- Understand the work styles and technical capabilities of the team members, especially with short response jobs like Dx reviews.

Resources

- In-House

- A/E Community
- Cost Engineering Dx
  - Virtual Team



  - Senior Estimators
  - A/E Community
- Division Resources

Example

Basic Information

Project Notes

- Complete detailed estimate and final project documents?
- Clear Definition of Scope?
- Is the work Negotiated 8(a)?, or Bid?
- Has estimate been approved by Chief, Cost Engineering Branch/Section?
- Is the Estimate prepared in MCACES?

Basis of Design

Project Notes

- Do the project notes give a Clear Definition of Scope?
- Do project notes indicate Type of Estimate, Contract Number?
  Example: Feasibility report, dated_____ ; DM #_____ , dated_____)?
- Do project notes list the current amendments and are they correct?

Construction Schedule

Project Notes

- Is Overtime Documented?
- Are Construction Windows considered and documented? (see item 4.10)
- Is there an Acquisition Plan? (When and method of acquisition)
- Is there a Sub-Contracting Plan?

Project Construction

Project Notes

- General Assumptions Noted and Reasonable?
- Site Access
- Borrow Areas Needed and Identified?
- Construction Methodology Sound?
- Unusual Conditions (Soil, Water, Weather) Considered and Documented?
- Unique Techniques of Construction Considered and Documented?
- Equipment/Labor Availability & Distance Traveled Considered?
- Environmental Concerns Documented?
- Contingencies given by Feature or Sub Feature?
- Effective Dates for Labor, Equipment, Material Pricing